

ABSTRACT OF THE DISCLOSURE

An in-pavement high intensity LED-based luminaire includes a housing, a power controller, a light module and a thermoelectric cooling device. The housing includes a generally flat top surface having at least one transparent window for output light passage.

- 5 The power controller has an input and an output, wherein the input is electrically connected to an airfield power infrastructure and the output is electrically connected to a light module.

The light module includes multiple high flux LEDs and a non-imaging light transformer.

The non-imaging light transformer includes an input end opposite an output end, a refractive member located around the LED optical axis, and a total internal reflection member. The

- 10 thermoelectric cooling device provides LED temperature control for emitted luminous flux, color and spatial intensity distribution stabilization, and is electrically connected to the power controller.

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